

BAY AREA AIR POLLUTION CONTROL DISTRICT
939 Ellis Street
San Francisco, California 94109

July 17, 1978

TO: ALL INTERESTED PERSONS

FROM: AIR POLLUTION CONTROL OFFICER

SUBJECT: PUBLIC HEARING ON CONTROL OF ORGANIC EMISSIONS
FROM VALVES AND FLANGES AT PETROLEUM REFINERIES.

On September 6, 1978 the Board of Directors of the Bay Area Air Pollution Control District will be holding a public hearing to consider amending Regulation 3 relating to the control of organic emissions from valves and flanges at petroleum refineries.

At its May 24, 1978 meeting, the California Air Resources Board adopted a model rule on the subject and has requested that this District adopt a similar one. Attached is a copy of the ARB model rule.

Your comments on the proposed model rule would be appreciated prior to August 21, 1978, so that Staff may consider these comments prior to the public hearing.

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AIR RESOURCES BOARD

Model Rule Limiting Emissions of Volatile Organic
Compounds from Valves and Flanges at Petroleum Refineries
(Adopted May 24, 1978)

Rule _____ Valves and Flanges at Petroleum Refineries

(1) Requirements for valves and flanges.

(A) A person shall not use any valve or flange at a petroleum refinery for handling volatile organic compounds unless such valve or flange does not allow the material being handled to leak into the atmosphere.

(B) Such valve or flange shall be deemed to be in violation of this provision if there is a visible liquid or indication of vapor emerging, or if there is a reading greater than 1,000 parts per million, expressed as propane, above background on an appropriate analyzer when the analyzer probe is held at the joining surfaces.

(C) A person shall not use any sampling valve on a line or vessel handling volatile organic compounds with a Reid vapor pressure equal to or greater than 80 millimeters of Mercury (mm Hg) (1.55 pounds per square inch) unless a second shut-off valve is located immediately upstream and both valves are shut off except when sampling occurs. This procedure is not intended to apply to close-coupled sampling valves or other specialized sampling installations that receive specific exemptions from the Air Pollution Control Officer.

(D) A person shall not use any valve, other than a valve on a product sampling line or a safety pressure relief valve, which is located at the end of a pipe or line containing volatile organic compounds unless such valve is sealed with a blind flange, plug, or cap when not in use. Specialized sampling valves exempted under Subsection (1)(C) shall be sealed with a plug, cap or other device when not in use.

(E) A person shall not install or use any new or reconditioned valve unless such valve meets the requirements of American Petroleum Institute Standard 598, "Valve Inspection and Test," 3rd edition, 1977.

(2) Inspection schedule.

(A) All valves handling volatile organic compounds which are in the gas phase at standard conditions (29.92

inches of Mercury, 68°F) shall be marked so as to be readily identifiable. Every such valve shall have affixed a record of inspection which shall bear a legible record of all inspections for a twelve month period. Alternative methods of record-keeping may be used, including the maintenance of records in a centralized plant office, provided the prior concurrence of the Air Pollution Control Officer has been obtained.

(B) All valves subject to Subsection (2)(A) shall be inspected for leaks at least once every three months. The inspection shall be accomplished by visually checking for an indication of vapor and by sampling with an appropriate analyzer. The result of "leak" or "no leak" shall be recorded on the inspection record along with the date of inspection and the inspector's initials.

(C) All valves handling volatile organic compounds which are in the liquid phase at standard conditions shall be visually inspected for leaks at least once every three months.

(D) All flanges shall be inspected for leaks by the methods set forth in Subsection (2)(B) and (2)(C) at least once every 12 months. All flanges which are located in areas which make inspection infeasible or unsafe for personnel are exempted from the inspection schedules in Subsections (2)(A), (2)(B), (2)(C) and (2)(D), provided the prior concurrence of the Air Pollution Control Officer has been obtained.

(3) Repair.

(A) Except as provided in Subsection (3)(B) below, any leak discovered by the procedure in Subsection (2) shall be repaired to a no-leak condition within 24 hours of discovery; if more than 24 hours is required for repair of a leaking valve or flange, a variance shall be applied for from the district hearing board. The date and time of repair for valve subject to Subsection (2)(A) shall be recorded on the valve inspection record.

(B) If safety considerations prevent the repair of any leaking valve or flange without the shut-down of an essential process unit, such repair shall be accomplished during the next shut-down of the essential process unit. If such shut-down will not occur within 24 hours of discovery, a variance shall be applied for from the district hearing board.

(C) A person shall be considered to be in violation of this subsection if a leaking valve or flange is not repaired within 24 hours and a variance has not been obtained for continued use of the valve or flange.



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(4) Violations.

The failure of a person to meet any requirement of this rule shall constitute a violation of this rule.

(5) Definition. - As used in this rule,

(A) "background" is defined as the ambient concentration of volatile organic compounds determined at least three (3) meters up-wind from the valve or flange to be inspected and uninfluenced by any specific emission point.

(B) "appropriate analyzer" is defined as a hydrocarbon analyzer which uses the flame ionization detection method.

(C) "volatile organic compound" is defined as any compound of carbon (excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and methane) that has a vapor pressure greater than 1.0 mm of Hg at standard conditions.